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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHU, KIM KWOK

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,353	Applicant(s) HORIKAWA ET AL.	
	Examiner Kim-Kwok CHU	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 12/16/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/14/2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Response to Remarks

1. Applicant's Remarks filed on December 16, 2008 have been fully considered but it is not persuasive.

With respect to Claims 1, 7 and 15, Applicant does not agree that the prior art of Miyata teaches "a recording control area to recording therein control information for controlling a laser power in accordance with a recording position" (page 12 of the Remarks, lines 8-10). Accordingly, in Fig. 6, the prior art of Miyata teaches a recording control areas 11 and 15 which store laser power control information for zone 1. For recording positions other than zone 1, there are respective OPC areas storing respective laser power control information as illustrated in Fig. 5.

Applicant also points out that the prior art of Miyata's OPC is "generally performed in a predetermined area is not always obtained on the entire surface of the optical disc" (page 12 of the Remarks, lines 20-24). Accordingly, Applicant does not claim the feature "obtained on the entire surface of the optical disc" and the prior art of Miyata's OPC areas are specific and corresponding to the data recording positions such as zone 1, zone 2 etc. as required in Claims 1, 7 and 15.

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Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11 and 14-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Miyata (U.S. Patent 6,052,347).

4. Miyata teaches an information recording medium having all of the elements and means as recited in claims 1-6, 14, 16, 18, 20 and 22. For example, Miyata teaches the following:

with respect to Claim 1, the information recording medium 1 (Fig. 11) comprising: a recording area 13 (Fig. 6; column 6, lines 13 and 14) to record therein record information (data) by irradiating laser light thereto (Fig. 11; data is recorded in zone 1, zone 2 etc; Fig. 5); and a recording control area 11, 15 (Fig. 6) to record therein control information (OPC) for controlling a laser power in accordance with a recording position (zone 1, zone 2, zone 3 etc.) in the recording area 13 (Fig. 6; column 6, lines 10-17; each OPC is respective to its recording zone).

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with respect to Claim 2, the control information (OPC) indicates an association between information which represents the recording position (zone) in the recording area 13 and information which represents recording sensitivity (radius with respect to laser power) in the recording position (column 6, lines 18-30).

with respect to Claim 3, the control information (OPC) indicates an association between information which represents the recording position (radius) in the recording area (zone) and information which represents an optimum laser power in the recording position (Figs. 5, 12 and 13; step 69).

with respect to Claim 4, the control information (OPC) indicates a correlation relationship (Fig. 14) between the recording position (radius) in the recording area (zone) and an optimum laser power in the recording position (Figs. 12 and 13; step 69).

with respect to Claim 5, an information recording apparatus (Fig. 11) comprising an optimizing device 39 (Fig. 12) for optimizing a laser power, on the basis of the control information (OPC) recorded in the recording control area 11, 15 of the information recording medium 1 (Figs. 6 and 11).

with respect to Claim 6, the optimizing device 39 roughly estimates the control information (OPC) at a recording position

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(radius) for which the corresponding control information does not exist, on the basis of the control information recorded in the recording control area (Fig. 5).

with respect to Claim 14, an information recording method (Fig. 13) comprising and an optimizing process of optimizing a laser power, on the basis of the control information recorded in the recording control area 13 of the information recording medium 1 (Figs. 11 and 13).

with respect to Claim 16, the information recording/reproducing apparatus comprising: a reproducing device 35 (read/write head) for reproducing the record information recorded on the information recording medium 1 (Figs. 11 and 12).

with respect to Claim 18, the information recording/reproducing method comprising a reproducing device 35 (read/write head) for reproducing the record information recorded on the information recording medium 1 (Figs. 11 and 12).

with respect to Claim 20, a computer program for record control to control a computer provided for the information recording apparatus to make the computer function as at least one portion of said recording device and the optimizing device (column 9; lines 34-40; software coding).

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with respect to Claim 22, a computer program for record/reproducing control to control a computer provided for the information recording/reproducing apparatus, the computer program making the computer function as at least one portion of the information recording apparatus and the reproducing device(column 9; lines 34-40; software coding).

5. Miyata teaches an information recording medium having all of the elements and means as recited in claims 7-11, 15, 17, 19, 21 and 23. For example, Miyata teaches the following:

with respect to Claim 7, an information recording apparatus comprising: a first recording device 35 (Fig. 11; read/write head) for irradiating laser light onto an information recording medium 1 and for recording record information (data) onto the information recording medium 1 (Fig. 6; area 13 is the data area); a control information generating device 39 (Fig. 12; column 8, lines 40-51) for obtaining an optimum laser power according to a recording position of the information recording medium 1 and for generating control information (OPC recorded in 11 and 15) which indicates an association between information which represents the recording position and information which represents the optimum laser power (Figs. 12 and 13); a correcting device 47 (Fig. 12) for correcting the control

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information generated by the control information generating device 39, on the basis of a result of running OPC (Optimum Power Calibration) (Fig. 14; recording power is linearly corrected/calculated according to data zones/radius); a second recording device 35 (Fig. 11; read/write head) for recording the control information generated by the control information generating device 39 and the control information corrected by the correcting device 47 (Figs. 12 and 14); and a controlling device 43 for controlling a laser power of the laser light irradiated onto the information recording medium 1, on the basis of the control information (OPC information) recorded by the second recording device (Figs. 12 and 13).

with respect to Claim 8, the second recording device 35 records the control information (OPC) generated by the control information generating device 39, onto the information recording medium 1 (Fig. 6).

with respect to Claim 9, the control information generating device 39 generates the control information (OPC), on the basis of a calibration value of a laser power obtained by performing running OPC (Optimum Recording Calibration) (Fig. 13).

with respect to Claim 10, the control information generating device 39 generates the control information (OPC) corresponding to each predetermined area (radius/zone) of the

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information recording medium 1 (Figs. 5 and 7).

with respect to Claim 11, the control information generating device 39 generates the control information (OPC) corresponding to a recording linear velocity of the information recording medium 1 (Fig. 10).

with respect to Claim 17, the information recording/reproducing apparatus comprising a reproducing device 35 (Figs. 11) for reproducing the record information recorded on the information recording medium 1 (Figs. 11 and 12).

with respect to Claim 21, a computer program for record control to control a computer provided for the information recording apparatus, the computer program making the computer function as at least one portion of the recording device, the control information generating device, the second recording device, and the controlling device (column 9, lines 34-40).

6. Method claims 15, 19 and 23 are drawn to the method of using the corresponding apparatus claimed in claims 7, 17 and 21. Therefore method claims 15, 19 and 23 correspond to apparatus claims 7, 17 and 21 and are rejected for the same reasons of anticipation as used above.

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Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 12 and 13 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Miyata (U.S. Patent 6,052,347) in view of Ito et al. (U.S. Publication US2003/0137909).

Miyata teaches optimum power control for recording/reproducing a recording medium very similar to that of the present invention. However, Miyata does not teach the following:

with respect to Claim 12, the information recording medium comprises a plurality of recording layers, and the controlling device controls the laser power irradiated to another recording layer, on the basis of the control information obtained in one recording layer, in a case in which a target, to which the recording device performs recording operation, is changed from the one recording layer to the another recording layer out of the plurality of recording layers.

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with respect to Claim 13, the information recording medium comprises a plurality of recording layers, and said control information generating device generates the control information in another recording layer, on the basis of the control information obtained in one recording layer, in a case in which a target, to which the recording device performs recording operation, is changed from the one recording layer to the another recording layer out of the plurality of recording layers.

Ito teaches the following:

an information recording medium 50 (Fig. 6) comprises a plurality of recording layers 51 and 52, and the controlling device 514 (Fig. 18) controls the laser power irradiated to another recording layer, on the basis of the control information (OPC stored in medium region 11) obtained in one recording layer, in a case in which a target, to which the recording device performs recording operation (Fig. 18), is changed from the one recording layer to the another recording layer out of the plurality of recording layers (Fig. 6; each layer has its OPC information 11).

an information recording medium 50 (Fig. 6) comprises a plurality of recording layers 51 and 52, and the control information generating device generates the control information

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(OPC stored in medium region 11) in another recording layer, on the basis of the control information obtained in one recording layer, in a case in which a target, to which the recording device performs recording operation (Fig. 18), is changed from the one recording layer to the another recording layer out of the plurality of recording layers (Fig. 6; each layer has its OPC information 11).

Although Miyata does not teach that the optimum power control is used on a multi-layer recording medium, for increasing the storage capacity, it would have been obvious to one of ordinary skill in the art to use a two layers recording medium such as Ito's as Miyata's recording medium, and furthermore, it would have been obvious to one of ordinary skill in the art to store OPC information in a recording medium such as Miyata's in each recording layer of Ito's two layered recording medium, because each recording layer has its OPC information corresponding to its information position/radius.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/

Examiner AU2627
March 27, 2009
(571) 272-7585

/HOA T NGUYEN/
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